# JOURNAL OF ELECTROANALYTICAL CHEMISTRY AND INTERFACIAL ELECTROCHEMISTRY, VOLUME 242 (1988)

## AUTHOR INDEX


Abruña, H.D. 87
Alonso Vante, N. 255
Anne, A. 171
Antonious, M.S. 191
Aoki, S. 203

Basu, A.S. 155
Bontempelli, G. 131

Chambers, J.Q. 265
Christensen, P.A. 23, 47, 327
Conway, B.E. 317
Cserfalvi, T. 77

Day, R.W. 265
Despić, A.R. 303
Dostert, P. 171
Drazić, D.M. 303

Etman, M. 191

Faulkner, L.R. 107, 123
Fleury, M.B. 171

Gajić-Krstajić, L. 303
Goyal, R.N. 209

Hamnett, A. 23, 47, 327
Hillman, A.R. 47

Imanishi, K. 203
Inzelt, G. 265

Kasem, K.K. 87
Kim, J. 107, 123
Kiss, G. 77
Kokkinidis, G. 221
König, U. 243
Kumar, A. 209
Kuwabata, S. 143

Lamy, C. 221
Leger, J.M. 221
Li, X.-P. 255
Liu, T.C. 317
Lo Coco, F. 131

Maida, Y. 143
Mareček, V. 277, 291
Ma Xiang 63
Messina, R. 181
Moiroux, J. 171

Nagaoka, T. 323

Okazaki, S. 323
Oturan, M.A. 171

Perichon, J. 181

Samanta, T. 155
Samec, Z. 277, 291
Satoh, M. 203
Savéant, J.M. 1
Savy, M. 191
Schiavon, G. 131
Schultze, J.W. 243
Strolin Benedetti, M. 171
Szabo, L. 265

Tranchant, A. 181
Tributsch, H. 255
Trevellick, P.R. 23
Tsushima, R. 203

Vielstich, W. 327
Vuković, M. 97

Wandlowski, T. 277, 291
Weeks, S.A. 327

Yasuda, Y. 203
Yoneyama, H. 143
Yoshino, T. 323

Zotti, G. 131

# JOURNAL OF ELECTROANALYTICAL CHEMISTRY AND INTERFACIAL ELECTROCHEMISTRY, VOLUME 242 (1988)

## SUBJECT INDEX


Alkali chlorides,
studies on the membrane potentials of a new microporous membrane in the presence of ——— with and without control of pores using precipitates of potassium salts (Samanta, Basu) 155

Aluminium,
effect of the addition of chloride on the anodic dissolution of ——— through barrier films (Despić et al.) 303

2-Aminopyridine,
mechanism of the electrochemical oxidation of ——— at a pyrolytic graphite electrode (Goyal, Kumar) 209

Aromatic compounds,
solvent effect on electrochemical polymerization of ——— (Imanishi et al.) 203

Barrier films,
effect of the addition of chloride on the anodic dissolution of aluminium through ——— (Despić et al.) 303

Bismuth,
structural effects in electrocatalysis. Oxidation of D-glucose on Pt (100), (110) and (111) single crystal electrodes and the effect of UPD adlayers of Pb, Tl and ——— (Kokkinidis et al.) 221

Carbon paste electrodes,
electroanalysis with modified ———. Coordination trends, selectivity and sensitivity (Kasem, Abruña) 87

Chemiluminescence,
anomalous transient behavior in the electrogenerated ——— of 9,10-diphenylanthracene (Kim, Faulkner) 107
Cyclohexanone as an effective hydride interceptor at platinum electrodes in non-aqueous media. Characterization via effects on the electrogenerated ——— of 9,10-diphenylanthracene (Kim, Faulkner) 123

Chloride,
effect of the addition of ——— on the anodic dissolution of aluminium through barrier films (Despić et al.) 303

COH,
evidence for ——— as an adsorbed intermediate in the anodic oxidation of methanol by ECDTMS and SNIFTIRS (Vielstich et al.) 327

Coordination chemistry,
involvement of ——— during electron transfer in the stabilization of the pyrite ($FeS_2$) photoanode (Li et al.) 255

Coordinative properties,
easy preparation of electrodes modified by conjugated polypyridine films displaying ——— and their effectiveness as mediators of electrocatalytic processes (Schiavon et al.) 131

Copper oxide,
electrochemical behaviour of $CuO + V_2O_5$ systems in molten dimethyl sulfone at 150 °C (Tranchant et al.) 181

Cyclohexanone,
——— as an effective hydride interceptor at platinum electrodes in non-aqueous media. Characterization via effects on the electrogenerated chemiluminescence of 9,10-diphenylanthracene (Kim, Faulkner) 123

Diffusion,
electron hopping between fixed sites. "———" and "migration" in counter-ion conservative redox membranes at steady state (Savéant) 1

*N*,*N*-Dimethylformamide,
reaction entropies in quinone reduction in ——— and propionitrile (Nagaoka et al.) 323

9,10-Diphenylanthracene,
anomalous transient behavior in the electrogenerated chemiluminescence of ——— (Kim, Faulkner) 107

Cyclohexanone as an effective hydride interceptor at platinum electrodes in non-aqueous media. Characterization via effects on the electrogenerated chemilunescence of ——— (Kim, Faulkner) 123

Electron hopping,
——— between fixed sites. "Diffusion" and "migration" in counter-ion conservative redox membranes at steady state (Savéant) 1

D-Glucose,
structural effects in electrocatalysis. Oxidation of ——— on Pt (100), (110) and (111) single crystal electrodes and the effect of UPD adlayers of Pb, Tl and Bi (Kokkindidis et al.) 221

Graphite,
mechanism of the electrochemical oxidation of 2-aminopyridine at a pyrolytic ——— electrode (Goyal, Kumar) 209

Hydride,
cyclohexanone as an effective ——— interceptor at platinum electrodes in non-aqueous media. Characterization via effects on the electrogenerated chemiluminescence of 9,10-diphenylanthracene (Kim, Faulkner) 123

Infra-red studies,
in-situ ——— in electrochemistry (Christensen et al.) 23
In-situ ——— of polythiophene growth (Christensen et al.) 47

Interface between two immiscible electrolyte solutions,
adsorption of phospholipids at the ———. Part I. Equilibrium adsorption of phosphatidylcholines at the water/nitrobenzene interface (Wandlowski et al.) 277

Kinetic analysis of the picrate ion transfer across the ——— from impedance measurements at the equilibrium potential (Wandlowski et al.) 291

Kolbe coupling reaction,
potential relaxation and interfacial capacitance behaviour of the ——— at Pt (Conway, Liu) 317

Lead,
structural effects in electrocatalysis. Oxidation of D-glucose on Pt (100), (110) and (111) single crystal electrodes and the effect of UPD adlayers of ———, Tl and Bi (Kokkinidis et al.) 221

Metal phase analysis,
application of an electroanalytical method to ——— (Ma Xiang) 63

Methanol,
evidence for COH as an adsorbed intermediate in the anodic oxidation of ——— by ECDTMS and SNIFTIRS (Vielstich et al.) 327

1-Methyl-4-phenyl pyridinium,
one-electron and two-electron reductions of ——— ($MPP^+$) (Oturan et al.) 171

Microporous membrane,
studies on the membrane potentials of a new ——— in the presence of alkali chlorides with and without control of pores using precipitates of potassium salts (Samanta, Basu) 155

Migration,
electron hopping between fixed sites. "Diffusion" and "———" in counter-ion conservative redox membranes at steady state (Savéant) 1

Nitrobenzene,
adsorption of phospholipids at the interface between two immiscible electrolyte solutions. Part I. Equilibrium adsorption of phosphatidylcholines at the water/——— interface (Wandlowski et al.) 277

Phosphatidylcholines,
adsorption of phospholipids at the interface between two immiscible electrolyte solutions. Part I. Equilibrium adsorption of ——— at the water/nitrobenzene interface (Wandlowski et al.) 277

Phospholipids,
adsorption of ——— at the interface between two immiscible electrolyte solutions. Part I. Equilibrium adsorption of phosphatidylcholines at the water/nitrobenzene interface (Wandlowski et al.) 277

Picrate ion,
kinetic analysis of the ——— transfer across the interface between two immiscible electrolyte solutions from impedance measurements at the equilibrium potential (Wandlowski et al.) 291

Platinum,
cyclohexanone as an effective hydride interceptor at ——— electrodes in non-aqueous media. Characterization via effects on the electrogenerated chemiluminescence of 9,10-diphenylanthracene (Kim, Faulkner) 123
Potential relaxation and interfacial capacitance behaviour of the Kolbe coupling reaction at ——— (Conway, Liu) 317
Structural effects in electrocatalysis. Oxidation of D-glucose on ——— (100), (110) and (111) single crystal electrodes and the effect of UPD adlayers of Pb, Tl and Bi (Kokkinidis et al.) 221
Polyaniline,
kinetics of ——— formation and redox processes (König, Schultze) 243
Polypyridine,
easy preparation of electrodes modified by conjugated ——— films displaying coordinative properties and their effectiveness as mediators of electrocatalytic processes (Schiavon et al.) 131
Polystyrene,
electrodes coated with ——— films containing surface-active agents. Attachment of screening capabilities for electrode reactions of electroactive ionic species (Kuwabata et al.) 143
Polythiophene,
in-situ infra-red study of ——— growth (Christensen et al.) 47
Potassium,
studies on the membrane potentials of a new microporous membrane in the presence of alkali chlorides with and without control of pores using precipitates of ——— salts (Samanta, Basu) 155
Precipitate-based electrodes,
amperometry at ——— (Kiss, Cserfalvi) 77
Propionitrile,
reaction entropies in quinone reduction in *N,N*-dimethylformamide and ——— (Nagaoka et al.) 323
Pyrite,
involvement of coordination chemistry during electron transfer in the stabilization of the ——— ($FeS_2$) photoanode (Li et al.) 255

Quinone,
reaction entropies in ——— reduction in *N,N*-dimethylformamide and propionitrile (Nagaoka et al.) 323

Redox membranes,
electron hopping between fixed sites. "Diffusion" and "migration" in counter-ion conservative ——— at steady state (Savéant) 1
Rhodium,
electrochemical investigation of an electrodeposited ——— electrode in acid solutions (Vuković) 97

Solvent effect,
——— on electrochemical polymerization of aromatic compounds (Imanishi et al.) 203
Surface-active agents,
electrodes coated with polystyrene films containing ———. Attachment of screening capabilities for electrode reactions of electroactive ionic species (Kuwabata et al.) 143

Tellurium,
structural effects in electrocatalysis. Oxidation of D-glucose on Pt (100), (110) and (111) single crystal electrodes and the effect of UPD adlayers of Pb, ——— and Bi (Kokkinidis et al.) 221
Tetracyanoquinodimethane,
cyclic voltammetric and potentiometric behavior of ——— polymer film electrodes. Effect of the nature and the concentration of the supporting electrolyte (Inzelt et al.) 265
Tungsten diselenide,
electrochemical stabilization of illuminated single crystal ——— anodes (Antonious et al.) 191

Vanadium oxide,
electrochemical behaviour of $CuO + V_2O_5$ systems in molten dimethyl sulfone at 150 °C (Tranchant et al.) 181

JOURNAL OF ELECTROANALYTICAL CHEMISTRY AND INTERFACIAL ELECTROCHEMISTRY

Vol. 242 Nos. 1 and 2 February 25, 1988

CONTENTS

Electron hopping between fixed sites. "Diffusion" and "migration" in counter-ion conservative redox membranes at steady state
J.M. Savéant (Paris, France) ..... 1

In-situ infra-red studies in electrochemistry
P.A. Christensen, A. Hamnett and P.R. Trevellick (Oxford, Great Britain) ..... 23

An in-situ infra-red study of polythiophene growth
P.A. Christensen, A. Hamnett (Oxford, Great Britain) and A.R. Hillman (Bristol, Great Britain) . 47

Application of an electroanalytical method to metal phase analysis
Ma Xiang (Beijing, People's Republic of China) ..... 63

Amperometry at precipitate-based electrodes
G. Kiss and T. Cserfalvi (Budapest, Hungary) ..... 77

Electroanalysis with modified carbon paste electrodes. Coordination trends, selectivity and sensitivity
K.K. Kasem and H.D. Abruña (Ithaca, NY, U.S.A.) ..... 87

Electrochemical investigation of an electrodeposited rhodium electrode in acid solutions
M. Vuković (Zagreb, Yugoslavia) ..... 97

Anomalous transient behavior in the electrogenerated chemiluminescence of 9,10-diphenylanthracene
J. Kim and L.R. Faulkner (Urbana, IL, U.S.A.) ..... 107

Cyclohexanone as an effective hydride interceptor at platinum electrodes in non-aqueous media. Characterization via effects on the electrogenerated chemiluminescence of 9,10-diphenylanthracene
J. Kim and L.R. Faulkner (Urbana, IL, U.S.A.) ..... 123

Easy preparation of electrodes modified by conjugated polypyridine films displaying coordinative properties and their effectiveness as mediators of electrocatalytic processes
G. Schiavon, G. Zotti (Padova, Italy), G. Bontempelli and F. Lo Coco (Udine, Italy) ..... 131

Electrodes coated with polystyrene films containing surface-active agents. Attachment of screening capabilities for electrode reactions of electroactive ionic species
S. Kuwabata, Y. Maida and H. Yoneyama (Osaka, Japan) ..... 143

Studies on the membrane potentials of a new microporous membrane in the presence of alkali chlorides with and without control of pores using precipitates of potassium salts
T. Samanta and A.S. Basu (Burdwan, India) ..... 155

One-electron and two-electron reductions of 1-methyl-4-phenyl pyridinium ($MPP^+$)
M.A. Oturan, P. Dostert, M. Strolin Benedetti (Fontaine-les-Dijon, France), J. Moiroux, A. Anne and M.B. Fleury (Paris, France) ..... 171

Electrochemical behaviour of $CuO + V_2O_5$ systems in molten dimethyl sulfone at 150°C
A. Tranchant, R. Messina and J. Perichon (Thiais, France) ..... 181

Electrochemical stabilization of illuminated single crystal $WSe_2$ anodes
M.S. Antonious, M. Etman and M. Savy (Meudon, France) ..... 191

Solvent effect on electrochemical polymerization of aromatic compounds
K. Imanishi, M. Satoh, Y. Yasuda, R. Tsushima and S. Aoki (Wakayama, Japan) ..... 203

Mechanism of the electrochemical oxidation of 2-aminopyridine at a pyrolytic graphite electrode
R.N. Goyal and A. Kumar (Roorkee, India) ..... 209

Structural effects in electrocatalysis. Oxidation of D-glucose on Pt (100), (110) and (111) single crystal electrodes and the effect of UPD adlayers of Pb, Tl and Bi
G. Kokkinidis, J.M. Leger and C. Lamy (Poitiers, France) ..... 221

Kinetics of polyaniline formation and redox processes
U. König and J.W. Schultze (Düsseldorf, F.R.G.) ..... 243

*(continued on p. 3 of cover)*

Contents (*continued*)


Involvement of coordination chemistry during electron transfer in the stabilization of the pyrite ($FeS_2$) photoanode
X.-P. Li, N. Alonso Vante and H. Tributsch (Berlin, F.R.G.) ..... 255

Cyclic voltammetric and potentiometric behavior of tetracyanoquinodimethane polymer film electrodes. Effect of the nature and the concentration of the supporting electrolyte
G. Inzelt, L. Szabo (Budapest, Hungary), J.Q. Chambers and R.W. Day (Knoxville, TN, U.S.A.) 265

Adsorption of phospholipids at the interface between two immiscible electrolyte solutions. Part I. Equilibrium adsorption of phosphatidylcholines at the water/nitrobenzene interface
T. Wandlowski, V. Mareček and Z. Samec (Prague, Czechoslovakia) ..... 277

Kinetic analysis of the picrate ion transfer across the interface between two immiscible electrolyte solutions from impedance measurements at the equilibrium potential
T. Wandlowski, V. Mareček and Z. Samec (Prague, Czechoslovakia) ..... 291

Effect of the addition of chloride on the anodic dissolution of aluminium through barrier films
A.R. Despić, D.M. Dražić and L. Gajić-Krstajić (Belgrade, Yugoslavia) ..... 303

*Short communications*

Potential relaxation and interfacial capacitance behaviour of the Kolbe coupling reaction at Pt
B.E. Conway and T.C. Liu (Ottawa, Canada) ..... 317

Reaction entropies in quinone reduction in *N,N*-dimethylformamide and propionitrile
T. Nagaoka, T. Yoshino (Ube, Japan) and S. Okazaki (Kyoto, Japan) ..... 323

*Preliminary note*

Evidence for COH as an adsorbed intermediate in the anodic oxidation of methanol by ECDTMS and SNIFTIRS
W. Vielstich (Bonn, F.R.G.), P.A. Christensen, S.A. Weeks and A. Hamnett (Oxford, Great Britain) ..... 327

*Book review* ..... 335

*Author index* ..... 337

*Subject index* ..... 338



JOURNAL OF ELECTROANALYTICAL CHEMISTRY AND INTERFACIAL ELECTROCHEMISTRY and BIOELECTROCHEMISTRY AND BIOENERGETICS

Publication schedule for the 1988 subscription (please note that Vols. 233–238 appeared in 1987)

| Month | S (1987) | O (1987) | N (1987) | D (1987) | J | F | M | A | |
|---|---|---|---|---|---|---|---|---|---|
| *J. Electroanal. Chem.* | 233/1+2<br>234/1+2 | 235/1+2<br>236/1+2 | 237/1<br>237/2 | 238/1+2 | 239/1+2<br>240/1+2 | 241/1+2<br>242/1+2 | 243/1<br>243/2 | 244/1+2 | The publication schedule for further issues will be published later. |
| *Bioelectrochem. Bioenerg.* | | | | | | | 253/1 | | |